



0052649

Chemical and Environmental Measurement Information

Recra LabNet Philadelphia
Analytical Report
REVISION

Client : TNU-HANFORD B99-085
RFW# : 9910L304
SDG/SAF #: H0560/B99-085

W.O. #: 10985-001-001-9999-00
Date Received: 10-07-99

SEMIVOLATILE

This narrative was corrected to add the TIC search for Tributylphosphate.

One (1) water sample was collected on 10-05-99.

The sample and its associated QC samples were extracted on 10-12-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8270B for TCL Semivolatile target compounds on 10-20-99.

The following is a summary of the QC results accompanying the sample results and a description of any problems encountered during their analyses:

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. The required holding times for extraction and analysis were met.
3. Non-target compounds were detected in the sample.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. All blank spike recoveries were within EPA QC limits.
7. The method blank contained the common laboratory contaminant Di-n-butylphthalate at a level less than the CRQL.
8. The sample was spectrally searched for Butylated Hydroxytoluene and Tributylphosphate; however, they were not identified in the sample.

[Signature]
/ J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

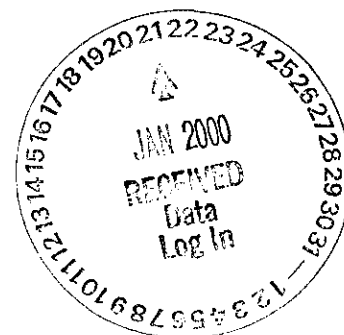
01-17-00
Date

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The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 10 pages.

RECEIVED
FEB 28 2000

EDMC



GLOSSARY OF BNA DATA

DATA QUALIFIERS

U	=	Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
J	=	Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
B	=	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
E	=	Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
D	=	Identifies all compounds identified in an analysis at a secondary dilution factor.
I	=	Interference.
NQ	=	Result qualitatively confirmed but not able to quantify.
A	=	Indicates that a TIC is a suspected aldol-condensation product.
N	=	Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
X	=	This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
Y	=	Additional qualifiers used as required are explained in the case narrative.



GLOSSARY OF BNA DATA

ABBREVIATIONS

BS	=	Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
BSD	=	Indicates blank spike duplicate.
MS	=	Indicates matrix spike.
MSD	=	Indicates matrix spike duplicate.
DL	=	Suffix added to sample number to indicate that results are from a diluted analysis.
NA	=	Not Applicable.
DF	=	Dilution Factor.
NR	=	Not Required.
SP, Z	=	Indicates Spiked Compound.



CUA

Page: 1a

* = Outside of EPA CLP QC limits.

Cust ID:	BOWLM5	BOWLM5	BOWLM5	SBLKER	SBLKER BS
RFW#:	002	002 MS	002 MSD	99LE1240-MB1	99LE1240-MB1
2-Chloronaphthalene	10 U	20 U	20 U	10 U	10 U
2-Nitroaniline	25 U	50 U	50 U	25 U	25 U
Dimethylphthalate	10 U	20 U	20 U	10 U	10 U
Acenaphthylene	10 U	20 U	20 U	10 U	10 U
2,6-Dinitrotoluene	10 U	20 U	20 U	10 U	10 U
3-Nitroaniline	25 U	50 U	50 U	25 U	25 U
Acenaphthene	10 U	84 %	84 %	10 U	79 %
2,4-Dinitrophenol	25 U	50 U	50 U	25 U	25 U
4-Nitrophenol	25 U	70 %	59 %	25 U	59 %
Dibenzofuran	10 U	20 U	20 U	10 U	10 U
2,4-Dinitrotoluene	10 U	81 %	80 %	10 U	72 %
Diethylphthalate	0.7 J	20 U	20 U	10 U	10 U
4-Chlorophenyl-phenylether	10 U	20 U	20 U	10 U	10 U
Fluorene	10 U	20 U	20 U	10 U	10 U
4-Nitroaniline	25 U	50 U	50 U	25 U	25 U
4,6-Dinitro-2-methylphenol	25 U	50 U	50 U	25 U	25 U
N-Nitrosodiphenylamine (1)	10 U	20 U	20 U	10 U	10 U
4-Bromophenyl-phenylether	10 U	20 U	20 U	10 U	10 U
Hexachlorobenzene	10 U	20 U	20 U	10 U	10 U
Pentachlorophenol	25 U	72 %	74 %	25 U	68 %
Phenanthrene	10 U	20 U	20 U	10 U	10 U
Anthracene	10 U	20 U	20 U	10 U	10 U
Carbazole	10 U	20 U	20 U	10 U	10 U
Di-n-butylphthalate	1 JB	20 U	1 JB	0.8 J	10 U
Fluoranthene	10 U	20 U	20 U	10 U	10 U
Pyrene	10 U	85 %	79 %	10 U	72 %
Butylbenzylphthalate	10 U	20 U	20 U	10 U	10 U
3,3'-Dichlorobenzidine	10 U	20 U	20 U	10 U	10 U
Benzo(a)anthracene	10 U	20 U	20 U	10 U	10 U
Chrysene	10 U	20 U	20 U	10 U	10 U
bis(2-Ethylhexyl)phthalate	10 U	20 U	20 U	10 U	10 U
Di-n-octyl phthalate	10 U	20 U	20 U	10 U	10 U
Benzo(b)fluoranthene	10 U	20 U	20 U	10 U	10 U
Benzo(k)fluoranthene	10 U	20 U	20 U	10 U	10 U
Benzo(a)pyrene	10 U	20 U	20 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	10 U	20 U	20 U	10 U	10 U
Dibenz(a,h)anthracene	10 U	20 U	20 U	10 U	10 U
Benzo(g,h,i)perylene	10 U	20 U	20 U	10 U	10 U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

BOWLM5

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-085

Matrix: (soil/water) WATER

Lab Sample ID: 9910L304-002

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: A102012

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: decanted: (Y/N)

Date Extracted: 10/12/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/20/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 4

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.89	3	JB
2.	UNKNOWN	7.15	4	JB
3.	UNKNOWN	7.51	6	JB
4.	UNKNOWN	22.79	9	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKER

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-085

Matrix: (soil/water) WATER

Lab Sample ID: 99LE1240-MB1

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: A102011

Level: (low/med) LOW

Date Received: 10/12/99

% Moisture: _____ decanted: (Y/N) _____

Date Extracted: 10/12/99

Concentrated Extract Volume: 1000 (uL)

Date Analyzed: 10/20/99

Injection Volume: 2.0 (uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N

pH: 7.0

CONCENTRATION UNITS:

Number TICs found: 8

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	6.11	3	J
2.	UNKNOWN	6.19	4	J
3.	UNKNOWN	6.89	5	J
4.	UNKNOWN	7.44	3	J
5.	UNKNOWN	7.51	7	J
6.	UNKNOWN	11.51	3	J
7.	UNKNOWN	12.55	9	J
8.	UNKNOWN	13.32	30	J

Recra LabNet - Lionville Laboratory
BNA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-085

DATE RECEIVED: 10/07/99

RFW LOT # :9910L304

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BOWLM5	002	W	99LE1240	10/05/99	10/12/99	10/20/99
BOWLM5	002 MS	W	99LE1240	10/05/99	10/12/99	10/20/99
BOWLM5	002 MSD	W	99LE1240	10/05/99	10/12/99	10/20/99

LAB QC:

SBLKER	MB1	W	99LE1240	N/A	10/12/99	10/20/99
SBLKER	MB1 BS	W	99LE1240	N/A	10/12/99	10/20/99

9910L304

A11

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client <u>TRU-Hanford B99-085</u>				Refrigerator # <u>1 2</u>			
Est. Final Proj. Sampling Date _____				#/Type Container			
Project # <u>10985-001-001-9999-00</u>				Liquid <u>3V BPG</u>			
Project Contact/Phone # _____				Solid _____			
RECRA Project Manager <u>Orlette Johnson</u>				Volume			
QC <u>Spec</u> Del <u>Std</u> TAT <u>30 day</u>				Liquid <u>40ml IL</u>			
Date Rec'd <u>10-7-99</u> Date Due <u>11/6/99</u>				Solid _____			
Account # _____				Preservatives _____			
ANALYSES REQUESTED →				ORGANIC			
				VOA BNA Pest/PCB Herb			
				INORG			
				Metal CN			
				Biocide IC anions 502/05 1/15			
				↓ RECRA LabNet Use Only ↓			
MATRIX CODES:				Lab ID			
S - Soil				Client ID/Description			
SE - Sediment				Matrix			
SO - Solid				Date Collected			
SL - Sludge				Time Collected			
W - Water				MS MSD			
O - Oil				0024H 0605C 0225H			
A - Air				05290			
DS - Drum Solids				Met ① 15FD 8mg ① 11/3/2 11/13/2			
DL - Drum Liquids				001 BOWL M4			
L - EP/TCLP Leachate				002 BOWL M5			
W1 - Wipe				X X 1 10-5-99 0515 ✓			
X - Other				1 1 0700 ✓ ✓			
F - Fish							

Special Instructions:

Ref # B99-085

COMPOSITE
WASTE

DATE/REVISIONS:

Met ① = As, Ba, Cd, Cr, Pb, Se, Ag, Cu.

2. Ni, V, Zn, Be

Ang ① = ICCL, ICFL, ICNO3, ICNO2, ICPO4,

4. KSO4, 1PH

5.

6.

RECRA LabNet Use Only

Samples were:

1) Shipped ☒ or
Hand Delivered _____423579530131
Airbill # _____2) Ambient or ☒ Chilled3) Received in Good
Condition ☒ or N4) Labels Indicate
Properly Preserved ☒ or N5) Received Within
Holding Times ☒ or N

Y or N

IC out of hold
pH out of hold

COC Tape was:

1) Present on Outer
Package ☒ or N2) Unbroken on Outer
Package ☒ or N3) Present on Sample
☒ or N4) Unbroken on
Sample ☒ or NCOC Record Present
Upon Sample Rec't ☒ or NCooler
Temp. 3.2 °C

Relinquished by	Received by	Date	Time
Fed Ex	TRU Murray	10-7-99	0945

Relinquished by	Received by	Date	Time
	ORIGINAL		
	REWRITTEN		

Discrepancies Between
Samples Labels and
COC Record? Y or N ☒
NOTES:

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B99-085-6		Page 1 of 1		
Collector Bowers/Trice		Company Contact C Cearlock		Telephone No. 372-9574		Project Coordinator TRENT, SJ		Price Code 7N		Data Turnaround 45 Days	
Project Designation 200 Area Source characterization - 200-CW-1 OU - QC Sa		Sampling Location 200 East B pond		SAF No. B99-085							
Ice Chest No. ERC99-012		Field Logbook No. EL 1511		Method of Shipment Fed ex							
Shipped To TMA/RECRA		Offsite Property No. A91410287		Bill of Lading/Air Bill No. 423579530130							
157810-5-99				COA B20CW1 671C							

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	ZnAc+NaOH to pH >9 Cool	Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HNO3 to pH <2	HNO3 to pH <2	HCl or H2SO4 to pH <2 Cool			
	Type of Container	P	P	P	aG	P	P	aGs*			
	No. of Container(s)	1	1	1	2	2	2	3			
Special Handling and/or Storage	Volume	500mL	1000mL	1000mL	1000mL	1000mL	1000mL	40mL			

SAMPLE ANALYSIS				Sulfides - 9030	See item (1) in Special Instructions	NO2/NO3 - 353.1; Ammonia - 350.3	Semi-VOA - 8270A (TCL)	Gross Alpha; Gross Beta	See item (2) in Special Instructions	VOA - 8260A (TCL); VOA - 8260A (Add- On) (1- Propanol, Ethanol)		
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Sample No.	Matrix *	Sample Date	Sample Time								
B0WLM4	Water	10-5-99	0515								
B0WLM5	Water	10-5-99	0700	X	X	X	X		X	X	

CHAIN OF POSSESSION	Sign/Print Names				SPECIAL INSTRUCTIONS	Matrix *
Relinquished By <i>Trice</i>	Date/Time 10/5/99 1330	Received By <i>Bel #1A</i>	Date/Time 10/5/99 1330	(1) IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate); pH (Water) - 9040 (2) ICP Metals - 6010A (Supertrace) (Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver); ICP Metals - 6010A (Supertrace Add-On) (Copper, Nickel, Vanadium, Zinc) <i>Not from a Rad area</i>	Soil Water Vapor Other Solid Other Liquid	
Relinquished By <i>Bel #1A</i>	Date/Time 10/6/99 1230	Received By <i>R. Nielsen</i>	Date/Time 10/6/99 1230			
Relinquished By <i>R. Nielsen</i>	Date/Time 10/6/99 1430	Received By <i>Fed Ex</i>	Date/Time			
Relinquished By <i>Fed Ex</i>	Date/Time 10-7-99 0945	Received By <i>T. Murray</i>	Date/Time 10-7-99 0945			

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time